LISTING OF THE CLAIMS

CLAIMS

What is claimed is:

1. (previously presented) An apparatus comprising:

a buffer for storing indications of events generated by a plurality of ports of a peripheral device, events include at least one of any of the following: an interrupt; an internal flag; a status indication of completion of the read operation; an indication that a new header is waiting; an indication that a packet header is ready; an indication triggered at an end of header processing, a descriptor, or a set of descriptors; a completion indication as a received packet which includes an acknowledgment; an indication of reception of a frame for transmission; an indication that a EventMask bit is cleared, an indication that the EventMask bit is cleared; an indication that a predetermined minimum number of event completed, said apparatus for transferring interrupts from the peripheral device to a host computer system, and

a controller having a preset condition for an application, said preset condition comprising one of: a determination that the buffer is full; a determination that at least a predetermined plurality of indications is stored in the buffer; a predetermined period has elapsed; and a determination that at least one indication is stored in the buffer and that a predetermined period has elapsed, said controller for, in response to a preset condition being met based on said indications, generating a control data block comprising a payload portion having a plurality of fields each corresponding to a port from said plurality of ports and a header portion having an identifier for identifying the control data block, moving the contents of the buffer to the payload portion of the control data block, and sending the control data block to the host computer system via one port of the plurality of ports.

2. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a determination that the buffer is full.

3. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a determination that at least a predetermined plurality of indications is stored in the buffer and that a predetermined period has elapsed.

4. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a determination that at least one indication is stored in the buffer and that a predetermined period has elapsed.

5. (Previously presented) An apparatus as claimed in claim 1, wherein the header portion comprises a count indicative of the number of indications included in the payload portion.

6. (original) An apparatus as claimed in claim 1, wherein the header portion comprises a time of day stamp.

7. (original) An apparatus as claimed in claim 1, wherein the buffer comprises a first in - first out memory buffer.

8. (previously presented) A communications device comprising the apparatus as claimed in claim 1.

9. (previously presented) A data communications network interface comprising the communications device as claimed in claim 8.

10. (previously presented) An apparatus as claimed in claim 1, further comprising:
a host processing system having a memory, a data communications interface for communicating data between the host computer system and a data communications network, forming a data processing system for controlling flow of interrupts from the data communication interface to the memory of the host processing system.

11. (previously presented) A method comprising transferring interrupts from a peripheral device to a host computer system, the peripheral device having a plurality of ports, the steps of transferring interrupts comprising:

storing interrupts generated by said ports of the peripheral device in a buffer;

determining if a preset condition is met, said preset condition comprising any of: a determination that the buffer is full; a determination that at least a predetermined plurality of indications is stored in the buffer; a predetermined period has elapsed; and a determination that at least one indication is stored in the buffer and that a predetermined period has elapsed, said controller for, in response to a preset condition being met based on said indications;

in response to the preset condition being met, generating a control data block comprising a payload portion having a plurality of fields each corresponding to a different port from said plurality of ports and a header portion having an identifier for identifying the control data block;

moving the contents of the buffer to the corresponding fields of the payload portion; and

sending the control data block to the host computer system via one of the ports.

12. (original) A method as claimed in claim 11, wherein the step of determining if the preset condition is met comprises determining if the buffer is full.

13. (previously presented) A method as claimed in claim 11, wherein the step of determining if the preset condition is met comprises determining if at least a predetermined plurality of indications is stored in the buffer and if a predetermined period has elapsed, indications include at least one of any of the following: an interrupt; an internal flag; a status indication of completion of the read operation; an indication that a new header is waiting; an indication that a packet header is ready; an indication triggered at an end of header processing, a descriptor, or a set of descriptors; a completion indication as a received packet which includes an

acknowledgment; an indication of reception of a frame for transmission; an indication that a EventMask bit is cleared, an indication that the EventMask bit is cleared; an indication that a predetermined minimum number of event completed.

14. (previously presented) A method as claimed in claim 12, wherein the step of determining if the preset condition is met comprises determining if at least one indication is stored in the buffer and if a predetermined period has elapsed.

15. (previously presented) A method as claimed in claim 12, wherein the header portion comprises a count indicative of the number of indications included in the payload portion.

16. (original) A method as claimed in claim 11, wherein the buffer comprises a first in - first out memory buffer.

17. (previously presented) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing transfer of interrupts, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect all functions of the apparatus of claim 1.

18. (previously presented) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing data processing, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect all functions of the apparatus of claim 10.

19. (previously presented) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for causing transfer of interrupts, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect all steps of the method of claim 11.

20. (previously presented) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for transferring interrupts, said method steps comprising all steps of the method of claim 11.

21. (previously presented) An apparatus as claimed in claim 1, wherein:

the preset condition comprises at least one of:

a determination that the buffer is full,

a determination that at least a predetermined plurality of indications is stored in the buffer and that a predetermined period has elapsed, and

determination that at least one indication is stored in the buffer and that a predetermined period has elapsed;

the header portion comprises a count indicative of the number of indications included in the payload portion;

the header portion comprises a time of day stamp; and

the buffer comprises a first in - first out memory buffer.

22. (previously presented) An apparatus as claimed in claim 21, further comprising:
a host processing system having a memory, a data communications interface for communicating data between the host computer system and a data communications network, forming a data processing system for controlling flow of interrupts from the data communication interface to the memory of the host processing system.